WHAT IS CLAIMED IS:

1. A bottom gate-type thin-film transistor, comprising:

a gate electrode formed on a transparent insulating substrate;

a gate insulating film overlying said gate electrode;

a semiconductor layer formed on said gate insulating film, said semiconductor layer having a source region and a drain region doped with impurities, and a channel region; and

an interlayer insulating film formed on said semiconductor layer, wherein

in said interlayer insulating film, a region in a vicinity of at least an interface between at least said channel region in said semiconductor layer has an impurity concentration of 10^{18} atom/cc or less.

2. A bottom gate-type thin-film transistor, comprising:

a gate electrode formed on a transparent insulating substrate;

a gate insulating film overlying said gate electrode;

a semiconductor layer formed on said gate insulating film, said semiconductor layer having a source region, and a drain region, impurities being doped and a channel region; and

an interlayer insulating film formed on said semiconductor layer, wherein

both said interlayer insulating film and said semiconductor layer are in direct contact each other and are

disposed above said gate electrode.

3. A method for manufacturing a bottom gate-type thin-film transistor on a transparent insulating substrate, comprising the steps of:

forming a gate electrode on a transparent substrate;

forming a gate insulating film on said gate electrode;

forming a semiconductor layer on said gate insulating film;

forming a mask on said semiconductor layer corresponding to said gate electrode;

doping impurities selectively into said semiconductor layer, using said mask; and

forming an interlayer insulating film on said semiconductor layer, after removal of said mask.

4. A method defined in Claim 3, further comprising the steps of:

removing, after removal of said mask, residue of said mask, together with a native oxide film formed on said semiconductor layer before formation of said mask.

5. A method defined in Claim 4, wherein removing said native oxide film by a dilute hydrofluoric acid.